

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Rec'd PCT/PTO 21 SEP 2004
PCT Application
PCT/JP2003/003452



Applicant's or agent's file reference FP03-0052-00	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP03/03452	International filing date (day/month/year) 20 March 2003 (20.03.03)	Priority date (day/month/year) 22 March 2002 (22.03.02)
International Patent Classification (IPC) or national classification and IPC G21K 7/00, G01N 23/04		
Applicant HAMAMATSU PHOTONICS K.K.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 20 March 2003 (20.03.03)	Date of completion of this report 02 October 2003 (02.10.2003)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP03/03452

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP 03/03452

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-3	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-3	NO
Industrial applicability (IA)	Claims	1-3	YES
	Claims		NO

2. Citations and explanations

Claims 1-3

Document 1: JP 4-265900 A (Nikon Corp.), 22 September 1992, entire text, all drawings, (Family: none)

Document 2: JP 9-251100 A (Olympus Optical Co., Ltd.), 22 September 1997, entire text, all drawings, (Family: none)

Document 3: JP 9-178900 A (Olympus Optical Co., Ltd.), 11 July 1997, entire text, all drawings, (Family: none)

Document 4: JP 7-243993 A (Hamamatsu Photonics Kabushiki Kaisha), 19 September 1995, entire text, all drawings, (Family: none)

Document 1 discloses a feature wherein an image-forming type soft X-ray microscope device, which comprises an elliptic rotary reflection mirror (9) that is configured from a multi-layer film, a zone plate (14) for collecting the X-rays from the object (13) and forming an image of the object, and a two-dimensional X-ray imaging element (15) for detecting the image of said object, is provided with an optical microscope that reflects the light from the illuminating light source (22) by means of

a reflection mirror (24) with angled holes formed therein, which is positioned in the vicinity of the object lens (23). In addition, document 1 also indicates that a detector such as a CCD, which is sensitive to visible light as well as X-rays, can be used as the two-dimensional X-ray imaging element (15).

Document 1 does not indicate that the imaging magnification of the X-ray image is adjusted by moving at least one component from among the X-ray image detection means, the sample material and the illuminating optical system along the optical axis in this device; however, document 2 discloses a soft X-ray microscope wherein the imaging magnification is changed by moving the detector (10) along the optical axis in order to change the distance between the detector (10) and the zone plate-type objective lens (9), and document 3 discloses an X-ray observation device that is equipped with a structure for changing the distance between the sample material and the X-ray optical system.

Furthermore, the provision of a second X-ray reflection means in addition to the first X-ray reflection means, as disclosed in document 4, is merely a design matter that can be configured by a person skilled in the art as necessary.